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On the subgenus *Eurysunius* Reitter of Turkey VII. Four new species from central Anatolia, and additional records (Coleoptera: Staphylinidae: Paederinae, *Astenus*)

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Abstract

In the study, four new species of *Astenus* (*Eurysunius*) Dejean (Coleoptera: Staphylinidae: Paederinae) are described and illustrated from central Anatolia, in Turkey, and distinguished from related consubgeners: *Astenus veyseli* Anlaş, **sp. n.** (Sivas province), *A. gultekini* Anlaş, **sp. n.** (Kırıkkale province), *A. kirani* Anlaş, **sp. n.** (Sivas province) and *A. neseti* Anlaş, **sp. n.** (Kırşehir province). A key to Turkish species of *Eurysunius* is provided. The distributions of 22 species in Turkey are mapped.

Key words: Coleoptera, Staphylinidae, Paederinae, *Astenus*, *Eurysunius*, Turkey, central Anatolia, new species

Introduction

The subgenus *Eurysunius* was erected by Reitter (1909). It belongs to the genus *Astenus* Dejean (Coleoptera: Staphylinidae: Paederinae). The subgenus is so far known only from the Palaearctic region, ranging from Japan and South Korea to Canary Islands. To date, 64 species have been described in this subgenus, 63 of them occur in the Western Palaearctic and only one species is known from Japan and South Korea (Schülke & Smetana, 2015; Assing, 2015; Anlaş, 2019). The vast majority of the species was recorded from Mediterranean countries. These species are distributed in Turkey (18 species), Spain (18 species), Italy (seven species), Morocco (seven species), Greece (five species), France (four species), Portugal (three species), Israel (two species), Algeria (one species) and Lebanon (one species).

In Turkey, 17 of 18 species are endemic to this country (Anlaş, 2019). Considering that none of the species was known prior to 2002, it seems likely that the diversity of *Eurysunius* in Turkey is far greater than currently known. The vast majority of *Eurysunius* species in Turkey are known from altitudes between 1500-2500 meters and most of them were found in nests of *Tetramorium* Mayr (Formicidae: Myrmicinae) species in Turkey.

The aim of the present paper is the description of four new species of the subgenus *Eurysunius*, which was collected from central Anatolia: *Astenus veyseli* sp. n. (Sivas province), *A. gultekini* sp. n. (Kırıkkale), *A. kirani* sp. n. (Sivas) and *A. neseti* sp. n. (Kırşehir). The subgenus is now represented in Turkey by 22 species, 21 of which are endemic.

Material, methods, and depositories

Specimens were studied with Stemi 508 microscope (ZeissGermany). Photographs of the habitus, forebody and aedeagus of the studied species were taken with a digital camera (Zeiss Axiocam ERC5s). All photographs were edited with the Helicon Focus v. 6, and CorelDRAW Graphics Suite 2020 software. The specimens were dissected. Genitalic preparations were made by macerating the aedeagus in warm 10% NaOH or KOH for 10–15 minutes, after examination it was transferred to glycerine and preserved in a microvial pinned below the beetle.

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Terms for external morphology and male terminalia of the subgenus *Eurysunius* follow Assing (2002). Head length was measured from the anterior margin of the frons to the posterior margin of the head, length of the pronotum was measured along the median line, elytral length was measured at the suture from the apex of the scutellum to the posterior margin of the elytra. The length of the median lobe of the aedeagus was measured from the apex of the ventral process to the base of the capsule. All specimens are deposited in Alaşehir Zoological Museum, Manisa, Turkey (AZMM).

Results

Descriptions of new species

Astenus (*Eurysunius*) *veyseli* Anlaş, sp. n. (Figs. 1-8; Map 1)

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Type material. Holotype: TURKEY: ♂, ‘‘TR. Sivas, Hafik, Yakaboyu 4 km NW, 40°08’08”N, 37°24’39”E, 1380 m 18.IV.2018, leg. Anlaş, Örgel & Köksal / Holotypus ♂, *Astenus* (*Eurysunius*) *veyseli* sp. n. det. S. Anlaş 2021” (AZMM). Paratypes: 3♂♂, 1♀, same data as holotype (AZMM); 4♂♂, 4♀♀, Sivas, Doğanşar, Kıpçak 3 km S, 40°22’54”N, 37°54’20”E, 2030 m, 14.IV.2019, leg. Anlaş, Örgel & Köksal (AZMM); 4♂♂, 10♀♀, Sivas, Yıldızeli, Yukarıçakmak 2 km W, 39°57’02”N, 36°41’43”E, 1560 m, 12.IV.2019, leg. Yağmur, Örgel & Köksal (AZMM); 3♂♂, 3♀♀, Sivas, Yakupoğlan 5 km NE, 40°08’16”N, 36°59’09”E, 1675 m, 13.IV.2019, leg. Anlaş, Örgel & Köksal (AZMM); 3♀♀, Sivas, Yıldız Dağı ski resort, 40°08’18”N, 36°56’18”E, 1730 m, 13.IV.2019, leg. Anlaş, Örgel & Köksal (AZMM);1♂, 11.VI.2020, Tokat, Almus, Babaköyü 8 km S, 40°14’10’’N, 36°59’02’’E, 1730 m, leg. Örgel & Kacar (AZMM).

Description. Habitus as in Fig. 1. Body 4.2–4.6 mm long. Coloration: head and pronotum black or dark brown, more than anterior half of elytra black or dark brown, with posterior area yellowish brown, abdomen black or dark brown with the posterior margins of segments VI-VIII reddish brown, antennae reddish and legs reddish brown.
Head transverse, 1.16-1.22 times as wide as long (Figs 1-2); dorsal surface convex, punctation umbilicate and very dense, pubescence short, decumbent and yellowish brown but not dense. Eyes relatively small in size with slightly protruding, shorter than postocular region in dorsal view. Antennae moderately slender, 1.08-1.12 mm long, all antennomeres oblong, antennomere III approximately 2.2 times as long as wide (Fig. 1).

Pronotum transverse, approximately 1.10-1.15 times as wide as long (Figs 1-2); approximately as broad as head or slightly narrower than head, slightly widest at anterior angles and narrowed posteriorly; dorsal surface with pronounced impressions; punctation somewhat coarser, non-umbilicate and sparser than that of head; pubescence short, decumbent and yellowish or yellowish brown, more distinct than than that of head; posterior margin of pronotum with 6-8 distinct setae; lateral margins each with three long black setae; one in anterior angle (on avarege 2.5 mm), one at anterior third (on avarege 2.3 mm), and one in posterior angle (on avarege 2.5 mm).

Elytra distinctly transverse, 1.70-1.80 times as long, 1.10-1.15 times as wide as pronotum (Figs 1-2); approximately 0.70 times as long as pronotum; microsculpture absent, punctation dense and granulose; pubescence yellowish brown, posterior margin of each elytron with 5-6 long black setae. Hind wings completely reduced.

Abdomen narower than elytra (0.85-0.90 times); widest at segment V, segments III–VI distinctly transverse (Fig. 1), punctation very dense and fine; interstices with microsculpture; pubescence yellowish brown; posterior margin of tergite VII with palisade fringe.

♂: sternite VII in posterior median area slightly depressed and with modified dark and short setae, posterior margin weakly concave (Fig. 3); sternite VIII deeply and acutely incised posteriorly, pubescence unmodified (Fig. 4); aedeagus 0.64-0.68 mm long and as in Figures 5-8.

Comparative notes. The species is distinguished from all its consubgeners except *A. sexsetosus* Assing, 2002 (Kayseri) and *A. kociani* Assing, 2015 (Nevşehir), by the presence of three (rather than two or one) long setae on either of the lateral margins of the pronotum. It differs from *A. sexsetosus* and *A. kociani* by the different morphology of the aedeagus, especially in lateral view, it is additionally separated as follows:

From *A. sexsetosus* by the different coloration of the forebody (*A. sexsetosus*: Head, pronotum and abdomen

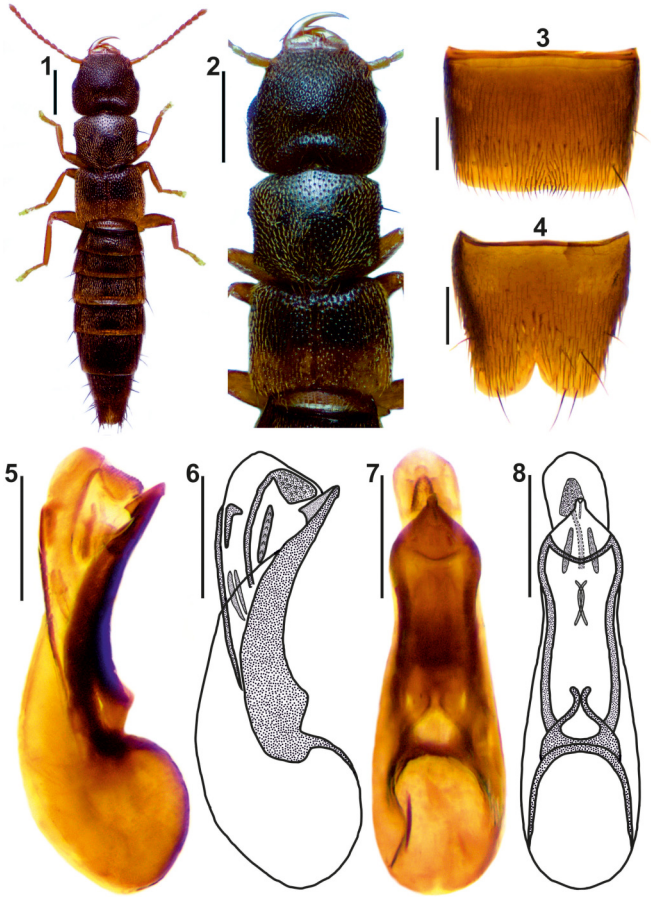
blackish brown, elytra yellowish, sometimes with a more or less infuscate portion near the scutellum), by less transverse head (*A. sexsetosus*: head 1.3 times as wide as long), by the much more transverse elytra and abdomen (*A. sexsetosus*: elytra 1.5-1.6 times as wide as long and abdomen slightly narrower than elytra), and by the different shape of the aedeagus both ventral and lateral view, especially apically more stouter in lateral view.

From *A. kociani* by the different coloration of the forebody (*A. kociani*: head and pronotum blackish; elytra dark yellowish-brown, with the region near the scutellum infuscate), by the much more transverse elytra (*A. kociani*: elytra approximately 1.50 times as wide as long), by the broader posterior incision in sternite VIII, and by the different shape of the aedeagus both ventral and lateral view, especially apically more stouter in lateral view.

For descriptions and illustrations of these species see Assing (2002, 2015), and also see key to the Turkish *Eurysunius* species.

Etymology. The specific epithet is in honor of a famous Turkish minstrel, Veysel Şatıroğlu (1894-1973) of the 20th century, who was born in Sivas province, Turkey.

Distribution and bionomics. The species was collected five localities from Sivas province (Map 1), in various grassland areas at altitudes of 1380-2030 m. The type specimens were collected in the nests of *Tetramorium immigrans* Santschi, 1927 and *T. indocile* Santschi, 1927.



FIGURES 1–8. *Astenus* (*Eurysunius*) *veyseli* sp. n. 1—habitus; 2—forebody; 3—Male sternite VII; 4—Male sternite VIII; 5, 6—Aedeagus in lateral view; 7, 8— Aedeagus in ventral view. Scale bars: 0.5 mm (Figs. 1-2), 0.2 mm (Fig. 3-8).

Astenus (*Eurysunius*) *gultekini* Anlaş, sp. n. (Figs. 9-16; Map 1)

urn:lsid:zoobank.org:act:8DECD03E-8772-4A8E-984F-8BF20408C472

Type material. Holotype: TURKEY: ♂, "TR. Kırıkkale, Çelebi, Tilkili 3 km E, 39°33'12"N, 33°30'41"E, 1427 m, 29.VI.2019, leg. Örgel & Köksal / Holotypus ♂, *Astenus* (*Eurysunius*) *gultekini* sp. n. det. S. Anlaş 2021" (AZMM). Paratypes: 1♂, same data as holotype (AZMM).

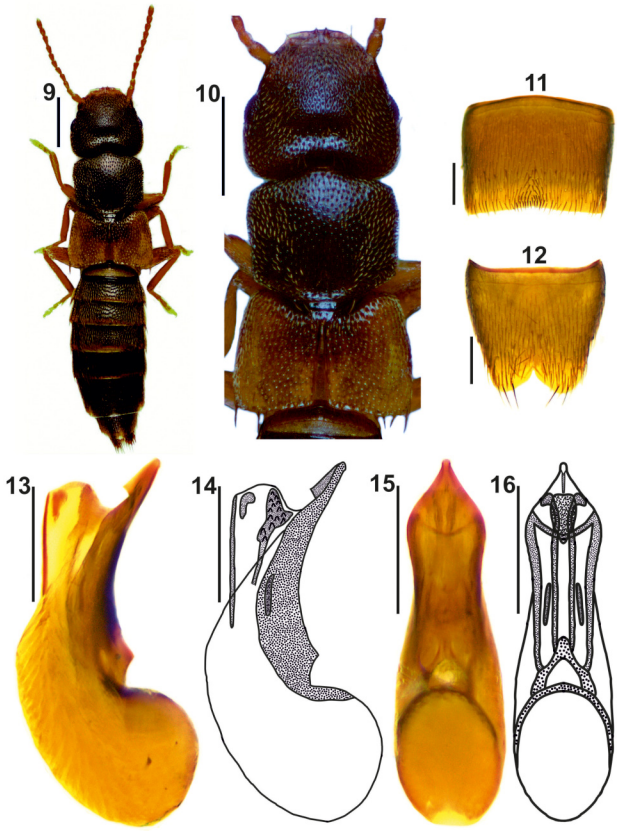
Description. Habitus as in Fig. 9. Body 3.9 mm long. Coloration: head, pronotum and abdomen blackish;

elytra yellowish brown, with area near scutellum and anterior margin infuscate; antennae reddish and legs reddish brown.

In general appearance similar to *A. veyseli*, but can be distinguished as follows:

Head 1.18 times as long as wide (Figs 9-10), punctation slightly denser than that of *A. veyseli*, antennae 0.97-0.99 mm long. Pronotum shorter than wide, approximately 1.1 times as wide as long and slightly wider than head (Figs 9-10). Elytra 1.75 times as wide as long (Figs 2A-B), punctation slightly denser than that of *A. veyseli*. Abdomen narrower than elytra (Fig. 9), 0.92 times as wide as elytra.

♂: sternite VII in posterior median area with some modified dark and short setae, posterior margin concave (Fig. 11); posterior incision of sternite VIII in the middle very narrow and acute (Fig. 12); aedeagus 0.68 mm long and as in Figures 13-16.



FIGURES 9–16. *Astenus* (*Eurysunius*) *gultekini* sp. n. 9—habitus; 10—forebody; 11—Male sternite VII; 12—Male sternite VIII; 13, 14—Aedeagus in lateral view; 15, 16— Aedeagus in ventral view. Scale bars: 0.5 mm (Figs. 9-10), 0.2 mm (Fig. 11-16).

Comparative notes. The new species can be distinguished from all other consubgeners except *A. sexsetosus*, *A. kociani* and *A. veyseli* by the presence of three (rather than two or one) long setae on either of the lateral margins of the pronotum. The new species is separated from these species by the different morphology of the male sexual characters, it is additionally separated as follows:

From *A. sexsetosus* by the smaller body (*A. sexsetosus*: 4.3-4.9 mm), by less transverse head (*A. sexsetosus*: head 1.3 times as wide as long and head broader than pronotum), by the much more transverse elytra (*A. sexsetosus*: elytra 1.5-1.6 times as wide as long), and by the different shape of the aedeagus both ventral and lateral view, especially apically more stouter in lateral view.

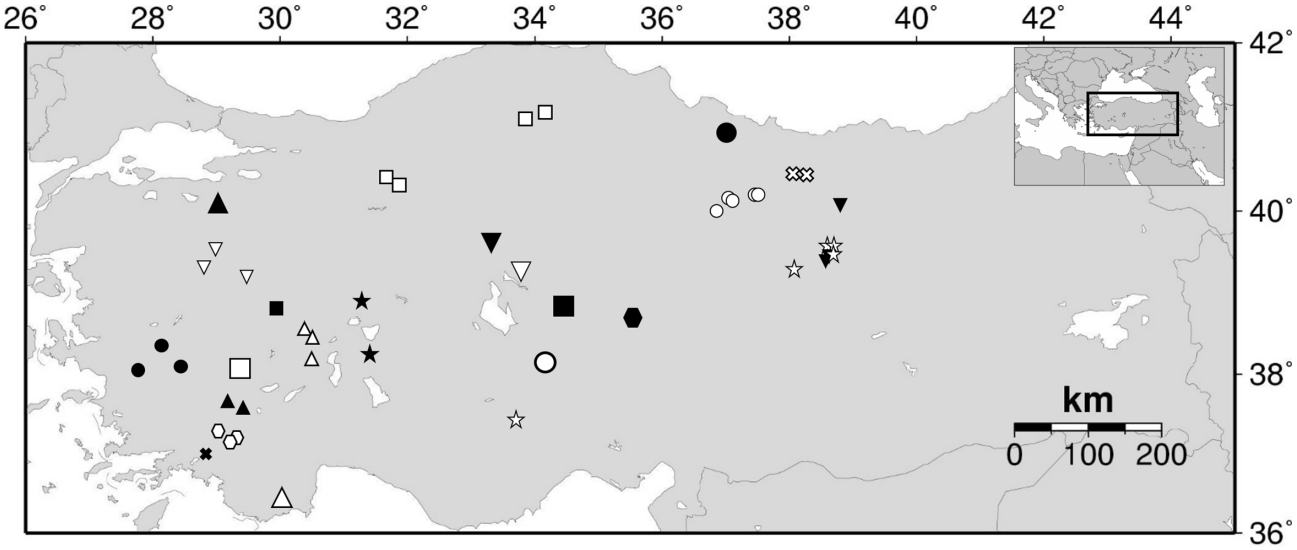
From *A. kociani* by the smaller body (*A. kociani*: 4.6 mm) and antennae (*A. kociani*: 1.15 mm), by the much more transverse elytra (*A. kociani*: elytra approximately 1.50 times as wide as long), by the different shape of the aedeagus both ventral and lateral view, apically more broader in ventral view.

From *A. veyseli* by the smaller body (*A. kociani*: 4.2-4.6 mm), by the narrower posterior incision in sternite VIII, and by the different shape of the aedeagus both ventral and lateral view, especially apically more thinner in lateral view.

For descriptions and illustrations of these species see Assing (2002, 2015), and also see key to the Turkish *Eurysunius* species.

Etymology. The species is dedicated to Dr. Levent Gültekin, Erzurum, a specialist on Curculionidae, who has carried out important entomological studies in the world.

Distribution and bionomics. The species was collected only one locality from Kırıkkale province (Map 1), in a grassland area at an altitude of 1430 m. The specimens were found in the nests of *Tetramorium chefketi* Forel, 1911.



MAP 1. Distribution of *Astenus* (*Eurysunius*) species in Turkey: *A. bicoloratus* Assing, 2002 (large filled circle), *A. brachati* Assing, 2011 (large filled triangle), *A. goeki* Anlaş, 2017 (large open triangle), *A. gultekini* sp. n (large filled inverted triangle), *A. gusarovi* Anlaş, 2015 (large open square), *A. honazicus* Anlaş, 2015 (small filled triangles), *A. ilgazi* Anlaş, 2016 (small filled squares), *A. kirani* sp. n (open crosses), *A. kociani* Assing, 2015 (large filled square), *A. kumlutasi* Anlaş, 2015 (small open inverted triangles), *A. melendizicus* Anlaş, 2018 (large open circle), *A. neseti* sp. n (large open inverted triangle), *A. occiduus* Assing, 2007 (small hexagons), *A. orgeli* Anlaş, 2015 (small filled circles), *A. paphlagonicus* Assing, 2002 (small open squares), *A. pelinae* Anlaş, 2019 (open stars), *A. rhodicus* Assing, 2013 (filled cross), *A. sandiklicus* Anlaş, 2014 (small open triangles), *A. sexsetosus* Assing, 2002 (large filled hexagon), *A. sivasicus* Anlaş, 2019 (small filled inverted triangles), *A. sultanicus* Assing, 2010 (filled stars), *A. veyseli* sp. n (small open circles).

Astenus (*Eurysunius*) *kirani* Anlaş, sp. n. (Figs. 17-24; Map 1)

urn:lsid:zoobank.org:act:C0208502-1BFB-48D0-A587-FDCEB8E02D46

Type material. Holotype: TURKEY: ♂, ‘‘TR. Sivas, Koyulhisar, Kızılelma 8 km SW, 40°22’54”N, 37°54’20”E, 2029 m, 15.IV.2019, leg. Anlaş, Örgel & Köksal / Holotypus ♂, *Astenus* (*Eurysunius*) *kirani* sp. n. det. S. Anlaş 2021” (AZMM). Paratypes: 3♂♂,4♀♀, same data as holotype (AZMM); 8♂♂, 8♀♀, Sivas, Suşehri, Kale 3 km SE, 40°21’56”N, 38°07’03”E, 1860 m, 16.IV.2018, leg. Anlaş, Örgel & Yaman (AZMM).

Description. Habitus as in Fig. 17. Body 3.9–4.5 mm long. Coloration: head and pronotum dark brown, posterior half of elytra yellowish, with anterior area blackish, abdomen dark brown or blackish, antennae reddish brown and legs with the femora dark-brown, the tibiae brown, and the tarsi yellowish brown.

Head transverse, 1.15-1.25 times as wide as long (Figs 17-18); dorsal surface convex, punctation shallow, very dense, and umbilicate; pubescence short, decumbent and yellowish but not dense. Eyes relatively small in size with very slightly protruding, in dorsal view distinctly shorter than postocular region. Antennae moderately slender, 1.05-1.15 mm long, all antennomeres oblong, antennomere III approximately 2.2-2.3 times as long as wide (Fig. 17).

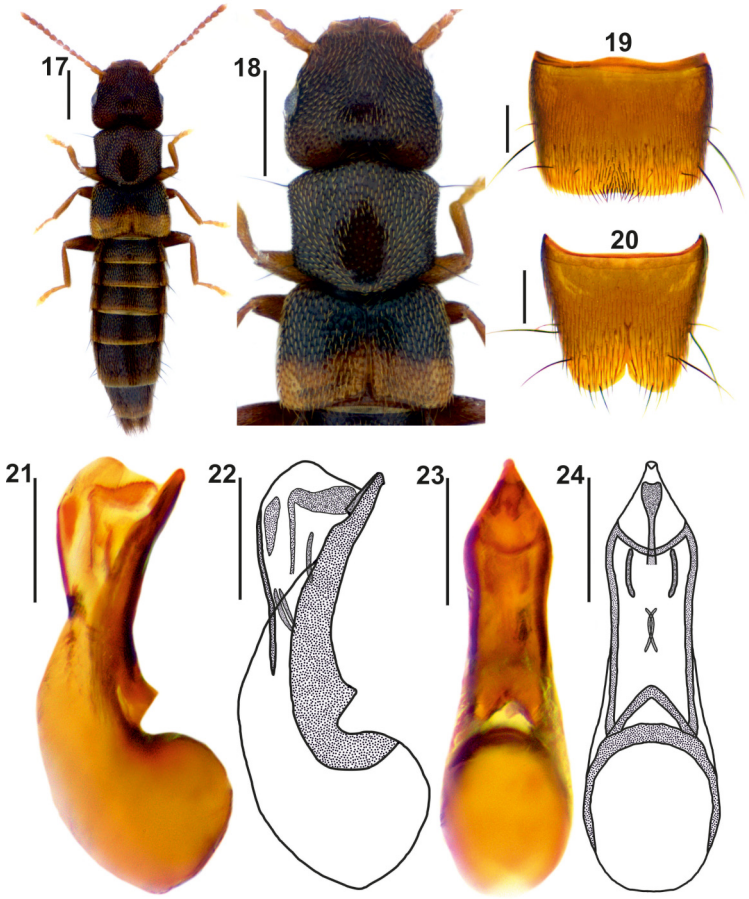
Pronotum octagonal shape, approximately 1.10-1.15 times as wide as long (Figs 17-18); slightly narrower than head, approximately 0.95 times as broad as head; posterior margin slightly convex; laterally with a shallow impression on either side; punctation somewhat coarser, non-umbilicate and sparser than that of head; pubescence of

similar as that of head, slightly more distinct. Anterior and posterior margin of pronotum with 4-6 black setae; lateral margins each with two long black setae (on avarege 2.1-2.4 mm); one in anterior angle and one in posterior angle.

Elytra distinctly transverse, 1.80-1.85 times as long, 1.10-1.15 times as wide as pronotum (Figs 17-18); approximately 0.65-0.70 times as long as pronotum; microsculpture absent; punctation distinctly granulose; surface somewhat more shiny than that of head and pronotum; pubescence of similar as that of pronotum; posterior margin of each elytron with 5-7 long black setae. Hind wings completely reduced.

Abdomen approximately 0.9 times as broad as elytra; widest at segment V, segments III–VI distinctly transverse (Fig. 17), punctation very dense and very fine on anterior tergites, gradually decreasing in density from tergite III to tergite VIII, moderately dense on tergites VII and VIII; interstices with distinct fine microsculpture; pubescence yellowish and decumbent; posterior margin of tergite VII with palisade fringe.

♂: sternite VII in posterior median area slightly depressed and with modified dark and short setae, posterior margin distinctly concave (Fig. 19); posterior incision of sternite VIII in the middle very narrow and acute, pubescence unmodified (Fig. 20); aedeagus approximately 0.62-0.68 mm long and as in Figures 21-24, apical portion of ventral process with slender-shaped in lateral view.

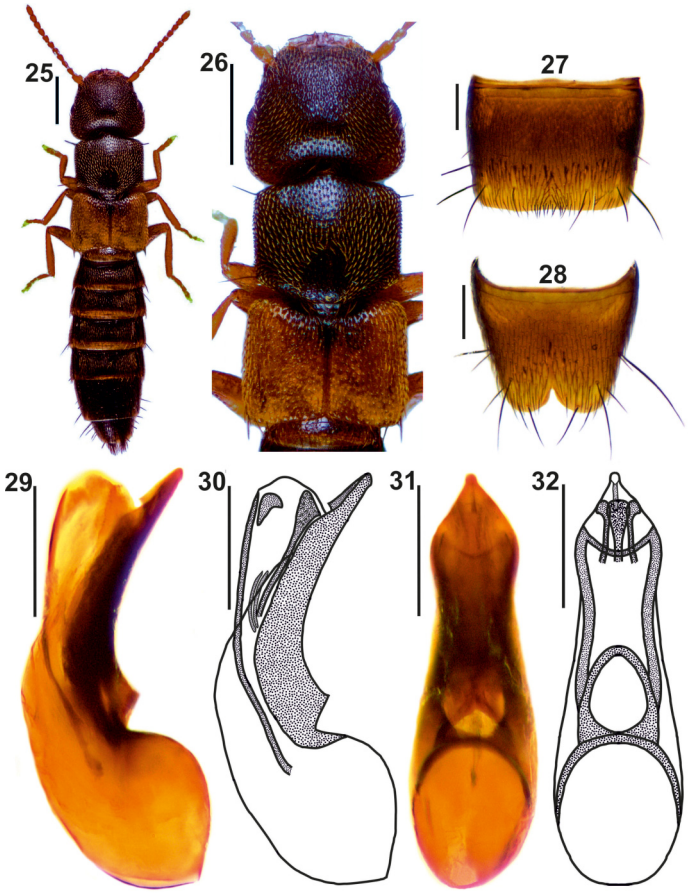


FIGURES 17–24. *Astenus* (*Eurysunius*) *kirani* sp. n. 17—habitus; 18—forebody; 19—Male sternite VII; 20—Male sternite VIII; 21, 22—Aedeagus in lateral view; , 23, 24— Aedeagus in ventral view. Scale bars: 0.5 mm (Figs. 17-18), 0.2 mm (Fig. 19-24).

Comparative notes. *Astenus kirani* is distinguished from all its consubgeners by the different morphology of the aedeagus, especially in lateral view. Based on the similar morphology of the male primary and secondary sexual characters, the new species is closely related to *Astenus sivasicus* Anlaş, 2019 (Sivas province), but distinguished from *A. sivasicus* from by the smaller body (*A. sivasicus*: 4.5-4.9 mm), by the much more transverse elytra (*A. sivasicus* sp. n.: elytra 1.70-1.75 times as wide as long), by the narrower posterior incision in sternite VIII, and by the different shape of the aedeagus both ventral and lateral view, especially apically more slender in lateral view.
For descriptions and illustrations of *A. sivasicus* see Anlaş (2019), and also see key to the Turkish *Eurysunius* species.

Etymology. The species is dedicated to Dr. Kadri Kıran, Edirne (Turkey), a specialist on Formicidae, who has carried out important entomological studies in Turkey.

Distribution and bionomics. The species was collected two localities from Koyulhisar and Suşehri districts in Sivas province (Map 1), in various grassland areas at altitudes of 1860-2030 m. The specimens were found in the nests of *Tetramorium immigrans* Santschi, 1927.



FIGURES 25–32. *Astenus* (*Eurysunius*) *neseti* sp. n. 25—habitus; 26—forebody; 27—Male sternite VII; 28—Male sternite VIII; 29, 30—Aedeagus in lateral view; 31, 32— Aedeagus in ventral view. Scale bars: 0.5 mm (Figs. 25-26), 0.2 mm (Fig. 27-32).

Astenus (*Eurysunius*) *neseti* s Anlaş, sp. n. (Figs. 25-32; Map 1)

urn:lsid:zoobank.org:act:B48E9F0D-1A64-4C64-B488-B54CCF767B82

Type material. Holotype: TURKEY: ♂, "TR. Kırşehir, Kaman, Başköy 3 km SW, 39°19'05"N, 33°49'49"E, 1520 m, 10.IV.2019, leg. Örgel & Köksal. / Holotypus ♂, *Astenus* (*Eurysunius*) *neseti* sp. n. det. S. Anlaş 2020" (AZMM). Paratypes: 1♂, 2♀♀, same data as holotype (AZMM); 2♀♀, same data as holotype but 27.III.2019 (AZMM).

Description. Habitus as in Fig. 25. Body 3.7-3.9 mm long. Coloration: head blackish or dark brown, pronotum and abdomen blackish; elytra reddish brown, with area near scutellum slightly infuscate; antennae yellowish brown and legs with the femora dark-brown, the tibiae brown, and the tarsi yellowish brown.

In general appearance similar to *A. kirani*, but it can be distinguished as follows:

Head 1.10-1.15 times as long as wide (Figs 25-26), punctation slightly denser and much more distinct than that of *A. kirani*, antennae 0.92-0.97 mm long. Pronotum shorter than wide, approximately 1.2 times as wide as long (Figs 25-26). Elytra 1.50 times as wide as long (Figs 25-26), punctation slightly denser than that of *A. kirani*. Abdomen narrower than elytra (Fig. 25), 0.80-0.85 times as wide as elytra; punctation slightly denser than that of *A. kirani*.

♂: sternite VII in posterior median area with modified dark and short setae, posterior margin slightly concave

(Fig. 27); sternite VIII deeply and acutely incised posteriorly, pubescence unmodified (Fig. 28); aedeagus 0.58-60 mm long and as in Figures 29-32.

Comparative notes. This new species is distinguished from other consubgeners particularly by the distinctive shape of the apex of the ventral process of the aedeagus. Based on the similar morphology of the male primary and secondary sexual characters, the new species is closely related to *A. kirani*, but mainly distinguished from *A. kirani* (and also from other species, with two long setae on the lateral margins of the pronotum from central Anatolia: *A. sivasicus*, *A. pelinae* Anlaş, 2019 and *A. melendizicus* Anlaş, 2018) by the different coloration of the body and by the different shape of the aedeagus both ventral and lateral view. In addition, the new species differs from other species known from central Anatolia (*A. sexsetosus*, *A. kociani*, *A. veyseli*, and *A. gultekini*) by the presence of two (vs. three) long setae on the lateral margins of the pronotum.

Etymology. The specific epithet is in honor of a famious Turkish minstrel, Neşet Ertaş (1938-2012), who was born in Kırşehir province, Turkey.

Distribution and bionomics. The species was collected only one locality from Kaman districts in Kırşehir province (Map 1), in a grassland area at an altitude of 1520 m. The specimens were found in the nests of *Tetramorium diomedeum* Emery, 1908.

Additional records

Astenus (*Eurysunius*) *sexsetosus* Assing, 2002 (Map 1)

Material examined. Kayseri: 1♂, 1♀, 11.IV.2018, Tomarza, Böke 7 km W, Süveğen Dağı, 38°21’09”N, 35°48’02”E, 1790 m, leg. Yağmur (AZMM).

Distribution and bionomics. This species was known only from the type locality (Kayseri province: Pazaröre-Bünyan) in Turkey (Assing, 2002). The above specimen is the first additional material recorded after the original description. The specimens were found in a nest of *Tetramorium moravicum* Novák & Sadil, 1941.

***Astenus* (*Eurysunius*) *pelinae* Anlaş, 2019** (Map 1)

Material examined. Sivas: 1♂, 1♀, 15.IV.2019, İmranlı, Aşağıculha 1 km S, 39°54’20”N, 38°07’49”E, 1750 m, leg. Anlaş, Örgel & Köksal. **Karaman:** 1♂, 28.V.2016, Ayrancı, Yüğlük Dağı Tepesi, 37°00’57”N, 33°46’48”E, 1942 m, leg. Örgel & Yaman.

Distribution and bionomics. This recently described species was already known from İmranlı and Divriği districts, Sivas province of central northern Anatolia (Anlaş, 2019). The above record from Karaman is situated 500 km to the southwest of the type locality. Near Aşağıçulha (Sivas: Imranlı) this species was found together with *A. sivasicus*. Two different *Eurysunius* species have been found in the same nest for the first time. The specimens from Sivas were found in a nest of *Tetramorium ferox* Ruzsky, 1903.

Astenus (*Eurysunius*) *sivasicus* Anlaş, 2019 (Map 1)

Material examined. Sivas: 1♂, 1♀, 16.IV.2019, İmranlı, Karacahisar 2 km W, 39°47’31”N, 38°20’38”E, 1870 m, leg. Anlaş, Örgel & Köksal; 2♂, 2♀, 15.IV.2019, İmranlı, Aşağıculha 1 km S, 39°54’20”N, 38°07’49”E, 1750 m, leg. Anlaş, Örgel & Köksal.

Distribution and bionomics. This recently described species was already known from Akıncılar district, Sivas province of central northern Anatolia (Anlaş, 2019). The species is here recorded from the surroundings of the type locality. The specimens were found in the nests of *Tetramorium ferox* Ruzsky, 1903 and an undescribed species.

Key to the Turkish species of the subgenus *Eurysunius*

The keys to Turkish *Eurysunius* species in Assing (2002, 2007, 2010, 2011, 2013, 2015) and Anlaş (2014, 2015, 2016, 2017, 2018, 2019) are updated as follows:

1. Lateral margins of pronotum with one seta at anterior angle; elytra with yellow coloration confined to posterior third. Northern

Anatolia: Ordu . . . . . *A. bicoloratus* Assing, 2002

– Lateral margins of pronotum with more than one seta 2

2. Lateral margins of pronotum with two setae at anterior and posterior angles 3

– Lateral margins of pronotum with three setae; one at anterior angle, one at anterior third, and one at posterior angle 19

3. Pronotum approximately as wide as long 4

– Pronotum transverse 6

4. Elytra uniformly yellowish or with yellow coloration confined to posterior half; legs and antennae yellowish red. Northern Anatolia: Bolu, Kastamonu . . . . . *A. paphlagonicus* Assing, 2002

– Elytra narrowly yellowish; legs and antennae reddish or reddish brown. 5

5. Posterior 1/6-1/5 of the elytra yellowish; antennomeres IV-X approximately as long as broad to weakly transverse. Greece: Rhodes; Southwestern Anatolia: Muğla . . . . . *A. rhodicus* Assing, 2013

– Posterior 1/8 of the elytra yellowish antennomeres; IV-X nearly 1.5 times as long as broad. Central-northwestern Anatolia: Bursa (Uludağ) . . . . . *A. brachati* Assing, 2011

6. Pronotum wider than head 7

– Pronotum narrower than head 8

7. Pronotum distinctly (approximately 1.20 times) wider than head. Central-western Anatolia: Afyonkarahisar, Konya . . . . . *A. sultanicus* Assing, 2010

– Pronotum slightly (approximately 1.05 times) wider than head. Western Anatolia: Denizli (Gölgeli Mountains) . . . . . *A. occiduus* Assing, 2007

8. Head and pronotum blackish or dark brown 9

– Head and pronotum reddish or reddish brown 12

9. Forebody completely blackish. Central-western Anatolia: Uşak and Kütahya . . . . . *A. kumlutasi* Anlaş, 2015

– Forebody not completely blackish 10

10. Forebody blackish or dark brown 11

– Head blackish or dark brown; pronotum reddish; elytra reddish-yellow with slightly infuscate portion near scutellum. Central Anatolia: Niğde (Melendiz Mountain) . . . . . *A. melendizicus* Anlaş, 2018

11. Forebody blackish, with posterior 1/3 of elytra reddish. Western Anatolia: Aydın, Izmir . . . . . *A. orgeli* Anlaş, 2015

– Forebody blackish or dark brown, posterior half of elytra reddish-yellow. Central-western Anatolia: Afyonkarahisar (Ahır Mountains) . . . . . *A. ilgazi* Anlaş, 2016

12. Dorsal surface of pronotum without pronounced impressions; head, pronotum and elytra completely reddish brown. Central-western Anatolia: Afyonkarahisar (Sandıklı Mountains) . . . . . *A. sandiklicus* Anlaş, 2014

– Dorsal surface of pronotum with pronounced impressions; head, pronotum and elytra not completely reddish brown 13

13. Head darker than pronotum and elytra; head reddish brown, pronotum and elytra reddish, with the posterior area slightly lighter. Southwestern Anatolia: Antalya . . . . . *A. goeki* Anlaş, 2017

– Head not darker than pronotum and elytra 14

14. Abdomen wider than elytra 15

– Abdomen narrower than elytra 16

15. Head and pronotum reddish brown, elytra yellowish brown, with area near scutellum, anterior margin, and anterior part of lateral margin infuscate, abdomen dark brown. Western Anatolia: Denizli (Çökelez Mountains) . . . . *A. gusarovi* Anlaş, 2015

– Head, pronotum and abdomen reddish brown, more than anterior half of elytra dark brown, with posterior area reddish yellow. Western Anatolia: Denizli (Honaz Mountain) . . . . . *A. honazicus* Anlaş, 2015

16. Elytra weakly transverse, with 1.10-1.15 times as long; completely yellowish brown, with the middle of each elytron slightly infuscate spots. Central Northern Anatolia: Sivas and Southern Anatolia: Karaman . . . . . *A. pelinae* Anlaş, 2019

– Elytra distinctly transverse, with 1.50-1.85 times as long; not completely yellowish brown 17

17. Elytra reddish brown, with area near scutellum slightly infuscate. Central Anatolia: Kırşehir . . . . . *A. neseti* **sp. n**

– Posterior half of elytra yellowish or yellowish brown, with anterior area blackish or dark brown 18

18. Elytra 1.80-1.85 times as wide as long; posterior incision of sternite VIII in the middle very narrow and acute; apical portion of ventral process with slender-shaped in lateral view of the aedeagus. Central Northern Anatolia: Sivas . . . . . *A. kirani* **sp. n**

– Elytra 1.70-1.75 times as wide as long; posterior incision of sternite VIII in the middle narrow; apical portion of ventral process with thickened-shaped in lateral view of the aedeagus. Central Northern Anatolia: Sivas . . . . . *A. sivasicus* Anlaş, 2019

19. Elytra black or dark brown, with posterior area yellowish brown. Central Northern Anatolia: Sivas . . . . . *A. veyseli* **sp. n**

– Elytra yellowish or yellowish brown, with a more or less infuscate portion near the scutellum 20

20. Body 3.9 mm long; head narrower than pronotum; elytra 1.75 times as wide as long. Central Anatolia: Kırıkkale . . . . . *A. gultekini* **sp. n**

– Body more than 4.3 mm long; head broader than pronotum or approximately as broad as pronotum; elytra 1.5-1.6 times as wide as long. 21

21. Head broader than pronotum; abdomen slightly narrower than elytra; legs and antennae yellowish brown; eyes distinctly shorter than postocular region. Central Anatolia: Kayseri . . . . . *A. sexsetosus* Assing, 2002

– Head approximately as broad as pronotum; abdomen slightly wider than elytra; legs and antennae reddish or blackish-brown; eyes nearly as long as postocular region. Central Anatolia: Nevşehir . . . . . *A. kociani* Assing, 2015

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References

Anlaş, S. (2014) A new species of *Astenus* (*Eurysunius*) Dejean, from Turkey (Coleoptera: Staphylinidae, Paederinae). *Turkish Journal of Entomology*, 38, 239–243.
https://doi.org/10.16970/ted.42581

Anlaş, S. (2015) Four new species of *Astenus* (*Eurysunius*) Dejean, 1833 from Western Anatolia, Turkey (Coleoptera: Staphylinidae, Paederinae). *Zootaxa*, 3986 (4), 472–482.
https://doi.org/10.11646/zootaxa.3986.4.6

Anlaş, S. (2016) On the subgenus *Eurysunius* Reitter in Turkey III. A new species from western Anatolia and additional records (Coleoptera: Staphylinidae, Paederinae, *Astenus*). *Turkish Journal of Entomology*, 40, 15–21.
https://doi.org/10.16970/ted.11481

Anlaş, S. (2017) On the subgenus *Eurysunius* Reitter of Turkey IV. A new species from southwestern Anatolia, with a key to species (Coleoptera: Staphylinidae, Paederinae, *Astenus*). *Acta Zoologica Academiae Scientiarum Hungaricae*, 63, 45–51.
https://doi.org/10.17109/AZH.63.1.45.2017

Anlaş, S. (2018) The Subgenus *Eurysunius* Reitter, 1909 (Coleoptera: Staphylinidae: Paederinae: *Astenus* Dejean, 1833) in Turkey: A New Species from Central Anatolia. *Acta Zoologica Bulgarica*, 70, 9–12.

Anlaş, S. (2019) On the subgenus *Eurysunius* Reitter of Turkey VI. Two new species from Sivas province in central northern Anatolia, with a key to Turkish species (Coleoptera: Staphylinidae: Paederinae, *Astenus*). *Zootaxa*, 4608 (2), 389–395.
https://doi.org/10.11646/zootaxa.4608.2.13

Assing, V. (2002) On the Turkish and Caucasian species of *Eurysunius*, subgenus of *Astenus* Dejean, with an appendix on *A. breuili* Jarrige (Coleoptera: Staphylinidae, Paederinae). *Linzer Biologische Beiträge*, 34, 265–274.

Assing, V. (2007) New species and additional records of Staphylinidae from Turkey V (Coleoptera). *Stuttgarter Beiträge zur Naturkunde*, Serie A (Biologie), 700, 1–64.

Assing, V. (2010) On the Staphylinidae of Turkey. VII. Five new species and additional records (Coleoptera: Staphylinidae). *Koleopterologische Rundschau*, 80, 71–102.

Assing, V. (2011) On the Staphylinidae of Turkey VIII. Eleven new species, two new synonymies, a new combination, and additional records (Coleoptera: Staphylinidae). *Koleopterologische Rundschau*, 81, 179–227.

Assing, V. (2013) On the Staphylinidae of Rhodes, Greece (Insecta: Coleoptera). *Linzer biologische Beiträge*, 45, 1587–1613.

Assing, V. (2015) A new myrmecophilous species of *Eurysunius* from Turkey (Coleoptera: Staphylinidae: Paederinae). *Linzer Biologische Beiträge*, 47, 1113–1118.

Reitter, E. (1909) *Fauna Germanica. Die Käfer des Deutschen Reiches. Nach der analytischen Methode bearbeitet. II. Band*. K. G. Lutz, Stuttgart, 392 pp., 39 pls. [pls. 41–80.]

Schülke, M. & Smetana, A. (2015) Staphylinidae. *In*: Löbl, I. & Löbl, D. (Eds.), *Catalogue of Palaearctic Coleoptera. Vol. 2. Hydrophiloidea—Staphylinoidea*. *Revised and Updated Edition*. Leiden, Brill, pp. 304–1134.